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The Essentials of Education

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THE ESSENTIALS OF EDUCATION

*Committee Report
Iowa Science Teachers Section
Iowa Academy of Science*

Public concern about basic knowledge and the basic skills in education is valid. Society should continually seek out, define and provide every person with those elements of education that are essential to a productive and a meaningful life.

The basic elements of knowledge and skill can be called the essentials of education. In an era dominated by cries for going back to the basics, for minimal competencies and survival skills, educators should reject simplistic solutions and declare a commitment to the essentials of education.

In defining the essentials, educators should avoid three easy tendencies: to limit the essentials to "the three Rs" in a society that is highly technological and complex; to define the essentials by what is tested at a time when tests are severely limited in what they can measure; and to reduce the essentials to a few "skills" when it is obvious that people use a complex of skills, knowledge and feelings to come to terms with their world. By avoiding these simplistic tendencies, educators will also avoid concentration on training in a few skills at the expense of educating students for the world of the future. Past experience has shown that such concentration has not only not educated students but has even failed in its limited intention of providing mastery of certain selected skills.

What, then, are the essentials of education? Educators agree that the overall goal of education is to develop informed, thinking, participating citizens, whose development depends not only upon specific citizenship education but also upon those essentials of education shared by all subjects.

In all subjects, students develop skills in using language and other symbol systems. They also develop the ability to reason, and they undergo experiences that lead to emotional and social maturity. Students master these skills and abilities through observing, listening, talking, reading and writing about science, mathematics, music, the social sciences and history, the arts and other aspects of our intellectual and social heritage. As they learn about their world and its heritage, they necessarily deepen their skills in language and acquire the basis for emotional and social growth. Skills and abilities do not grow in isolation from content. The interdependence of skills and content is the central concept of the essentials of education.

Educators should resist pressures to concentrate solely upon easy-to-teach, easy-to-test bits of knowledge. They must go beyond the short-term objectives of training for jobs or producing citizens who can perform rote tasks but who cannot reason about their society and make informed judgments.

The essentials of education include the ability to use language to think and to communicate; to use mathematical knowledge and methods to solve problems; to reason logically; to apply and to understand scientific knowledge and methods; to make use of technology and to understand scientific knowledge and methods; to make use of technology and to understand the expressions of others; to understand other languages and cultures; to understand spatial relationships; to apply knowledge about health, nutrition, physical care and occupations to the world beyond school; to acquire the capacity to meet unexpected challenges; to recognize and to use one's full learning potential; and to prepare to go on learning for a lifetime.

The essentials of education can be defined as that set of experiences which enables learners to become aware of the world around them and to develop an understanding and appreciation of the interdependence of the many facets of that world. The common core in all these experiences is the ordering of these facets through abstractions and symbols. The basic task of education is to enable each learner to use these abstractions and symbols with power and ease.

Determining the essentials of education is far more demanding and significant than listing isolated skills assumed to be basic. It must involve the joint determination of the essentials by many segments of society in addition to professional educators. Among these are legislators, school boards, parents, workers' organizations, businesses, publishers and other groups and individuals with an interest in education. All must now participate in a coordinated effort on behalf of society to confront the task of specifying the essentials. Everyone has a stake in the essentials of education.

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Cancer Facts

James Hungerford, Department of Science Education, Marshalltown Community High School

Did you know —

- that the total, age-adjusted cancer death rate for U.S. women is on the decline?
- that the total cancer death rate for U.S. men (excluding the death rates associated with smoking) is on the decline?
- that 80 to 90 percent of cancers are due to environmental factors?
- that excessive alcohol consumption and overeating is responsible for increased cancer rates?

Want to know more? Write for a free copy of *A Challenge to Fear*, by Elyse M. Rogers. Write: Dow Chemical Company, Health and Environment Research, Midland, Michigan 48640. This 25-page booklet is available free, and may be ordered in classroom quantities.